

## B.4 PRICE/COST SCHEDULE

### ITEM INFORMATION

It is the intent of the Government to award a Firm-Fixed Price contract for Annual Diagnostic Radiation Safety Survey and the Departmental Inspection of Imaging Service Equipment. The services are to be performed at the VA Loma Linda Healthcare System, 11201 Benton St., Loma Linda, CA 92357. The Contractor shall furnish all labor, materials, equipment, and supplies specified herein to perform the services. The contract period shall be for one (1) base year with the Government having the option to exercise four (4) one-year renewal periods.

### PRIOD OF PRFORMANCE:

Base Year: September 17, 2017 through September 16, 2018					
LINE ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	ESTIMATED TOTAL COST
1	Departmental Radiation Safety Inspections Seven (7) Departments	7	JB	\$_____	\$_____
2	Diagnostic X-Ray Tube Procedure Performance Evaluation (23 are Dental Units)	53	EA	\$	\$
3	Review of VA Facility Policy and Procedures Manual	1	EA	\$	\$
4	CT Scanner Evaluation	6	EA	\$_____	\$_____
5	DEXA	1	EA	\$_____	\$_____
6	Digital Mammography Unit MQSA Evaluation including Printer and RWS's	2	EA	\$	\$
7	Dose Calibrators (4 units), Total 4 Accuracy Checks and 12 Linearity Checks per Year (Sources for test provided by the Government)	16	EA	\$	\$
8	Patient Dose Assessment Per X-RayTube	32	EA	\$_____	\$_____
Estimated Base Year Total:					\$_____

**Option Year One: September 17, 2018 through September 16, 2019**

LINE ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	ESTIMATED TOTAL COST
1	Departmental Radiation Safety Inspections Seven (7) Departments	1	JB	\$_____	\$_____
2	Diagnostic X-Ray Tube Procedure Performance Evaluation (23 are Dental Units)	53	EA	\$	\$
3	Review of VA Facility Policy and Procedures Manual	1	EA	\$	\$
4	CT Scanner Evaluation	6	EA	\$_____	\$_____
5	DEXA	1	EA	\$_____	\$_____
6	Digital Mammography Unit MQSA Evaluation including Printer and RWS's	2	EA	\$	\$
7	Dose Calibrators (4 units), Total 4 Accuracy Checks and 12 Linearity Checks per Year (Sources for test provided by the Government)	16	EA	\$	\$
8	Patient Dose Assessment Per X-RayTube	32	EA	\$_____	\$_____
Estimated Option Year One Total:					\$_____

**Option Year Two: September 17, 2019 through September 16, 2020**

LINE ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	ESTIMATED TOTAL COST
1	Departmental Radiation Safety Inspections Seven (7) Departments	1	JB	\$_____	\$_____
2	Diagnostic X-Ray Tube Procedure Performance Evaluation (23 are Dental Units)	53	EA	\$	\$
3	Review of VA Facility Policy and Procedures Manual	1	EA	\$	\$
4	CT Scanner Evaluation	6	EA	\$_____	\$_____
5	DEXA	1	EA	\$_____	\$_____
6	Digital Mammography Unit MQSA Evaluation including Printer and RWS's	2	EA	\$	\$
7	Dose Calibrators (4 units), Total 4 Accuracy Checks and 12 Linearity Checks per Year (Sources for test provided by the Government)	16	EA	\$	\$
8	Patient Dose Assessment Per X-RayTube	32	EA	\$_____	\$_____
Estimated Option Year Two Total:					\$_____

<b>Option Year Three: September 17, 2020 through September 16, 2021</b>					
LINE ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	ESTIMATED TOTAL COST
1	Departmental Radiation Safety Inspections Seven (7) Departments	1	JB	\$_____	\$_____
2	Diagnostic X-Ray Tube Procedure Performance Evaluation (23 are Dental Units)	53	EA	\$	\$
3	Review of VA Facility Policy and Procedures Manual	1	EA	\$	\$
4	CT Scanner Evaluation	6	EA	\$_____	\$_____
5	DEXA	1	EA	\$_____	\$_____
6	Digital Mammography Unit MQSA Evaluation including Printer and RWS's	2	EA	\$	\$
7	Dose Calibrators (4 units), Total 4 Accuracy Checks and 12 Linearity Checks per Year (Sources for test provided by the Government)	16	EA	\$	\$
8	Patient Dose Assessment Per X-RayTube	32	EA	\$_____	\$_____
Estimated Option Year Three Total:					\$_____

<b>Option Year Four: September 17, 2021 through September 16, 2022</b>					
LINE ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	ESTIMATED TOTAL COST
1	Departmental Radiation Safety Inspections Seven (7) Departments	1	JB	\$_____	\$_____
2	Diagnostic X-Ray Tube Procedure Performance Evaluation (23 are Dental Units)	53	EA	\$	\$
3	Review of VA Facility Policy and Procedures Manual	1	EA	\$	\$
4	CT Scanner Evaluation	6	EA	\$_____	\$_____
5	DEXA	1	EA	\$_____	\$_____
6	Digital Mammography Unit MQSA Evaluation including Printer and RWS's	2	EA	\$	\$
7	Dose Calibrators (4 units), Total 4 Accuracy Checks and 12 Linearity Checks per Year (Sources for test provided by the Government)	16	EA	\$	\$
8	Patient Dose Assessment Per X-RayTube	32	EA	\$_____	\$_____
Estimated Option Year Four Total:					\$_____

PRICE/COST SCHEDULE		
BASE YEAR:	September 17, 2017 through September 16, 2018	\$
OPTION YEAR ONE:	September 17, 2018 through September 16, 2019	\$
OPTION YEAR TWO:	September 17, 2019 through September 16, 2020	\$
OPTION YEAR THREE:	September 17, 2020 through September 16, 2021	\$
OPTION YEAR FOUR:	September 17, 2021 through September 16, 2022	\$
ESTIMATED AGGERGATE TOTAL BASE + FOUR OPTION YEARS:		\$

## B.5 DESCRIPTION/SPECIFICATIONS/WORK STATEMENT AND REQUIREMENTS

The Contractor shall provide all labor, materials, parts, equipment, tools, hazardous/nonhazardous waste disposal, and permits when required to perform all services for annual diagnostic radiation safety survey and the departmental inspection of imaging service. Sources for Accuracy checks and Linearity checks will be provided by the Government. The services are to be performed at the VA Loma Linda Healthcare System, 11201 Benton St., Loma Linda, CA 92357.

Tests and measurements shall be made to comply with United States Department of Health and Human Services, FDA Title 21, Chapter 1, Subchapter J, Sections 1020.31 through 1020.32 (21 CFR 1020), California Radiation Control Regulations (CFCR) Title 17, American College of Radiology (ACR), National Cancer Institute, and Joint Commission on Accreditation of Healthcare Organizations (JCAHO). These Survey Checks and Tests are required by the Nuclear Regulatory Commission and JCAHO to be done on a quarterly and yearly basis. The Contractor shall be available within 24 hours in case of emergency repair or for new equipment calibration to avoid any delay in patient procedures or study. The Contractor shall provide diagnostic X-ray performance evaluation for radiation safety survey which includes a review of Departments and the VA Facility Policy and Procedures Manual.

The Contractor shall conduct equipment inspections or quality control surveys of the imaging equipment listed below. The Contractor shall ensure the imaging equipment's compliance with applicable Federal regulations and ACR recommendations, and shall include, but not be limited to, monitoring the following basic performance characteristics.

1. Departmental Radiation Safety Inspections (Seven (7) Departments)
  - a. Medicine Department
  - B. Imaging Department main bldg.
  - C. Operating Room
  - D. Dental Department ACC
  - E. Imaging Department ACC
  - F. Cardiology Department
  - G. Dental Department main bldg.
2. Fifty-three (53) Diagnostic X-Ray Tube Procedure Performance Evaluations (23 are Dental Units).
3. Review of VA Facility Policy and Procedures Manual.
4. Six C.T. Scanner Evaluations:
  - a. Siemens Definition Somatom EE# 40013 (S/N 60168) Room 3E-29
  - b. Potential New CT/PET Installations
  - c. Symbia Spect-CT T16, EE# 57788 (S/N 1182), Room 4E-35 (B)
  - d. Symbia Spect-CT T16, EE# 57789 (S/N 1181), Room 4E-33 (B)
  - e. Symbia Spect-CT T6, EE# 40016 (S/N 1001), Room 4E-31 (C)
  - f. PET CT Biograph m CT Siemens EE #51232 (S/N 1154) Room 4E-30
5. Mammography 2 Units Evaluation:

- a. Selenia Dimensions Tomo Mammo EE# 62079 (S/N81004143344), which includes Mammography Processor Console EE# 62080 (S/N 81404143365); and Mammography Film Viewer AGFA Mammo film EE# 38017 (S/N2003-1310409) Room 30-54B.
  - b. ACC Building Selenia Dimensions EE# 72735 & 72736 (S/N:81203166815 & 81103166898) Console EE# 72735 (S/N: 81403166425)
- 6. Four Dose Calibrators in Hot Lab. Four (4) Accuracy Checks and Twelve (12) Linearity Checks per year.
  - a. Intego PET Infusion EE# 57516 (S/N3029 111-30006)
  - b. ATOM LAB 500, EE# 50367 (S/N11040234)
  - c. CRC-25W, EE# 42775 (S/N260259)
  - d. CRC-15W, EE# 27550 (S/N155779)
- 7. Thirty-two Patient Dose Tube Assessments (Sources provided by the Government).

## **REQUIRED TEST FOR ANNUAL RADIOGRAPHIC SURVEY**

Physics inspections of radiographic and fluoroscopic equipment shall comply with the ACR Technical Standard for Diagnostic Medical Physics Performance Monitoring of Radiographic and Fluoroscopic Equipment. The performance of each radiographic and fluoroscopic unit must be evaluated at least annually. This evaluation should include, but not be limited to, the following tests, as applicable.

1. Dosimetry (radiation vs. output)
2. Exposure reproducibility
3. mA or mAs linearity
4. kVp accuracy and reproducibility
5. Timer accuracy and reproducibility
6. Half value layer
7. X-ray field to light field alignment
8. X-ray field to image receptor centering
9. X-ray beam to image receptor perpendicularity
10. Actual vs. Indicated SID
11. Actual vs. Indicated collimator field size
12. Positive Beam Limitation (PBL) function
13. Automatic Exposure Control (AEC) reproducibility
14. AEX kVp compensation
15. AEC minimum response time
16. Collimator light illuminance
17. Mechanical support of tubehead
18. Visual and audible indication of exposure
19. Entrance skin exposure (ESE), dose charts
20. Grid uniformity and alignment
21. Minimum field size
22. Control panel indicators
23. Proper indication of multiple tubes on units so equipped
24. Mechanical locks
25. Warning signs and labels

## 26. Focal spot indicator

### **FLUOROSCOPIC SURVEY**

1. Exposure rate output measurements
2. High contrast resolution
3. Low contrast resolution
4. Half value layer
5. kVp accuracy and reproducibility
6. Minimum field size
7. X-ray beam to viewed image size
8. Scatter radiation measurements
9. Cumulative timer function
10. Primary barrier transmission
11. Image intensifier interlock
12. X-ray field to image receptor centering
13. X-ray beam to image receptor perpendicularity
14. Warning signs

### **CT UNIT**

Performance Evaluation shall be done at least annually in accordance with ACR Computed Tomography Quality Control Manual and it shall include, but not be limited to, the following tests:

1. Actual vs. Indicated scan increment
2. Measurement of radiation output (CTDI)
3. CT number linearity, accuracy and uniformity
4. High contrast resolution
5. Low contrast performance
6. Precision (noise)
7. Contrast scale
8. Actual vs. Indicated scan angle
9. Image thickness- Axial mode
10. Table travel accuracy
11. Artifact Evaluation

Facility evaluation/policy review shall also be tested or completed during this time frame.

### **MAMMOGRAPHY UNIT - QC Tests**

The qualified diagnostic medical physicist inspecting mammography equipment must meet the qualifications outlined in the MQSA. Inspections must comply with the latest requirements posted on the ACR web site for the manufacturer of the digital mammography unit being inspected, including:

1. Mammographic Unit Assembly Evaluation
2. Collimation Assessment
3. Artifact Evaluation
4. kVp Accuracy and Reproducibility
5. Beam Quality Assessment- HVL Measurement
6. Evaluation of System Resolution
7. Automatic Exposure Control (AEC) Function Performance
8. Breast Entrance Exposure, AEC Reproducibility and Average Glandular Dose

9. Radiation Output Rate
10. Phantom Image Quality Evaluation
11. Signal to Noise Ratio and Contrast to Noise Ratio Measurements
12. Viewbox Luminance and Room Illuminance
13. Review Workstation Tests

## **BONE DENSITOMETER EVALUATION**

1. Patient Dose Measurements.
2. Scatter Radiation Measurements.
3. QC Verification and Accuracy of Measurements Verification.

## **NUCLEAR MEDICINE:**

### **PET-CT UNIT and SPECT-CT Units**

Evaluations of CT Units as outlined in CT section

## **DOSE CALIBRATORS:**

1. Linearity: quarterly
2. Accuracy: annually

## **HOURS OF SERVICE**

The Contractor shall perform the services as specified herein Monday through Friday, with the exception of Government Holidays (see below), between the hours of 6:00a.m. and 4:00p.m. The COR shall establish hours for services on these days if required.

New Year's Day	1 January	Labor Day	1 <sup>st</sup> Mon. in September
M L King's Birthday	3 <sup>rd</sup> Mon. in January	Columbus Day	2 <sup>nd</sup> Mon. in October
President's Day	3 <sup>rd</sup> Mon. in February	Veterans Day	11 November
Memorial Day	Last Mon. in May	Thanksgiving Day	4 <sup>th</sup> Thurs. in November
Independence Day	4 July	Christmas Day	25 December

When one of the holidays falls on Sunday, the following Monday shall be observed as a legal holiday by U.S. Government Agencies. When a holiday falls on a Saturday, the preceding Friday shall be observed as a legal holiday. Also included would be any other day specifically declared by the President of the United States to be a National holiday.

## **CONTRACTING OFFICERS REPRESENTATIVE (COR)**

The Radiation Safety Officer from the VA Loma Linda Healthcare System shall be the COR for



this contract. No service shall be provided without the approval of the COR or his/her designee of this contract.

The Contractor shall not accept any instructions issued by any other person(s) other than the Contracting Officer or his/her delegated representative(s) acting within the limits of his/her authority.

### **SAFETY AND FIRE PREVENTION**

In the performance of this contract, the Contractor shall take such safety precautions as necessary to protect the lives and health of the occupants of the building. Fire and safety deficiencies, which exist and are part of the responsibility of the Contractor, shall be immediately corrected. If the Contractor fails or refuses to correct deficiencies promptly, the COR may issue an order stopping all, or any part, of the work.

The Contractor shall comply with applicable Federal, State, and local safety and fire regulations and codes, which are in effect during the performance period of the contract.

The Contractor personnel shall follow applicable facility policies concerning fire/disaster programs.

### **PERSONNEL POLICY**

The parties agree that the contract personnel working under this contract **shall not** be considered VA employees for any purpose and shall be considered employees of the Contractor.

### **POLICY**

All Contractor personnel assigned to the performance of this contract shall wear a Contractor-provided uniform that clearly identifies the individual as a Contractor. Contractor personnel shall not wear sandals, flip-flop style footwear, or open toed shoes. The Contractor shall ensure that the staff assigned will be cognizant of sexual harassment, drug-free workplace and other appropriate federal employment requirements.

All tasks accomplished by the Contractor personnel will be performed to preclude damage or defacement of government-owned furnishings, fixtures, equipment and facilities. The Contractor will report any damage observed or caused by the Contractor personnel to the COR. The Contractor shall be responsible for repair or replacement of Government-owned items or facilities to previous condition, if determined to be at fault by the COR.

### **CONTRACTOR SUBMITTALS /INSURANCE REQUIREMENTS**

The Contractor shall procure and maintain liability insurance of at least \$100,000, while the contract is in effect. The Contractor is also required to comply with federal and state Workers Compensation and liability insurance.

Within 15 days of contract award the Contractor shall furnish to the Contracting Officer certification from the insurance company indicating that the coverage has been obtained and that it may not be changed or cancelled without guaranteed thirty (30) day notice to the Contracting Officer. New certifications shall be furnished prior to the expiration date.

### **EXERCISE OF OPTION YEARS**

The Government is not obligated to exercise option periods as referenced in this contract. Determination to exercise the option year shall be evaluated prior to the expiration of the period in effect. If it is determined to be in the best interest of the Government, the Option Year will be exercised (refer to FAR 52.217-9- "Option to Extend the Term of the Contract").

#### **SMOKING POLICY**

Smoking is not permitted within or around the VA Healthcare System facilities, except in designated areas.

#### **PARKING POLICY**

It is the responsibility of Contractor personnel to park only in designated parking areas. Parking information is available from the VA Police. The VA will not invalidate or make reimbursement for parking violations of the Contractor's personnel under any circumstances.